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AF / 3683 # FIW

CUSTOMER NUMBER 25267

2700 First Indiana Plaza
135 North Pennsylvania Street
Indianapolis, Indiana 46204

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group: 3683 }
Atty. Docket: 8266-0740 }
Applicants: Mobley, et al. }
Title: HOSPITAL BED CASTER }
AND BRAKING SYSTEM }
Serial No.: 09/992,455 }
Filed: November 26, 2001 }
Examiner: Sy, Mariano Ong }

Certificate Under 37 C.F.R. 1.8(a)

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On July 6, 2004

D. Cwiklinski
D. Cwiklinski

Dated: July 6, 2004

APPEAL BRIEF TRANSMITTAL

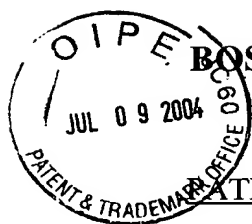
MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In connection with the Notice of Appeal filed May 5, 2004, an Appeal Brief is being filed for the above-identified application. The original and two (2) copies are being submitted herewith.

The Commissioner is hereby authorized to charge any filing fees under 37 C.F.R. 1.16 or processing fees under 37 C.F.R. 1.17 which may be required during the prosecution of this appeal, or credit any overpayment, to Bose McKinney & Evans LLP's Deposit Account No. 02-3223. A duplicate copy of this sheet is enclosed.

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on July 6, 2004

By D. Cwiklinski
D. Cwiklinski

Dated: July 6, 2004

APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Appeal Brief is submitted in triplicate and in furtherance of the Notice of Appeal filed May 5, 2004. A Final Rejection (hereinafter "the Final Rejection") was issued February 6, 2004 and the Notice of Appeal was filed on May 5, 2004. Pursuant to 37 C.F.R. § 1.192, an Appendix containing a copy of the claims involved in the appeal is attached.

The Commissioner is hereby authorized to charge the Appeal Brief filing fee under 37 C.F.R. 1.17(c) in the amount of \$330.00 to Bose McKinney & Evans LLP's Deposit Account No. 02-3223.

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Real Party in Interest

The above-referenced application has been assigned to Hill-Rom Services, Inc., which is a Delaware corporation headquartered in Batesville, Indiana.

Related Appeals and Interferences

There are no related appeals and interferences which will directly affect or be directly affected by or having a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-15, and 21-27 are pending in the above-identified application and are attached hereto in the Appendix.

Claims 21-27 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-4, 8, and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,269,388 to Reichow et al. (hereinafter "Reichow") in view of U.S. Patent No. 5,330,064 to Hall (hereinafter "Hall").

Claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being patentable over Reichow in view of Hall as applied to claim 1 above, further in view of U.S. Patent No. 3,880,394 to Wisecarver (hereinafter "Wisecarver") and U.S. Patent No. 3,705,438 to Stosberg et al. (hereinafter "Stosberg").

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Reichow in view of Hall and Stosberg.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Reichow in view of Hall as applied to claim 1 above, and further in view Stosberg.

Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hall in view of Wisecarver and in view of Stosberg.

Claims 11, and 13-15 have been allowed.

Accordingly, claims 1-10, 12, and 21-27 are on appeal.

Status of Amendments

An amendment was filed subsequent to the Final Rejection on February 6, 2004 (hereinafter "the Final Response"). An Advisory Action was issued on April 26, 2004

(hereinafter “the Advisory Action”) refusing to enter the amendments to the claims in the Final Response.

Summary of the Invention

The following is a concise explanation of the invention defined in the claims involved in this appeal. However, the citations in the following summary should not be construed as the only locations of support in the application for the claims involved in this appeal. Further, the following should not be construed to limit the claims involved in this appeal or any other patentable feature of the present disclosure.

Regarding independent claims 1, 7, and 21, Figs. 1-3 illustrate a patient support apparatus 20 including a base frame 28 coupled to a patient support 22 through an articulating deck 24 pivotally mounted to an intermediate frame 26 (p. 8, ll. 1-5). A plurality of square caster mounting tubes 38 are welded to spaced-apart longitudinally extending side frame members 32 of base frame 28, as shown in Figs. 5 and 6 (p. 8, ll. 5-9 and 30-31). A sleeve 42 of a caster device 44 is received in each of the caster mounting tubes 38 (p. 8, ll. 9-10 and 32).

As shown in Figs. 5 and 6, each square cross-section caster mounting tube 38 includes a plurality of external side walls including a first or inside wall 82, an outside wall 80, a front wall 84, a rear wall 86, an upper edge 88, a lower edge 90, an interior, and an exterior (p. 9, ll. 10-13). A first exterior surface of the first external side wall 82 contiguously engages outside surface 66 of side frame member 32 (p. 9, ll. 12-14). Mounting tube 38 is welded to side frame member 32 at the corner 92 formed by front wall 84 and inside wall 82 and at the corner 94 formed by rear wall 86 and inside wall 82 to outside surface 66 of side frame member 32 (p. 9, ll. 14-16).

The interior surface of each of inside wall 82, outside wall 80, front wall 84, and rear wall 86 are drilled, machined, bored, or otherwise formed to include partial cylindrical concave section 93, as shown for example in Figs. 5-6, for receiving the cylindrical sleeve 42 of the caster device 44 (p. 9, ll. 18-22). To prevent rotation of sleeve 42 within mounting tube 38, caster devices 44 are each provided with a set screw 57 near the point of connection between sleeve 42 and caster fork 51 (Fig. 4; p. 16, ll. 24-26). Mounting tube 38 is formed to include a notch 59 formed in lower edge 90 of rear wall 86 (p. 16, ll. 27-28). When caster devices 44 are received in mounting tubes 38, set screw 57 is received in notch 59 as shown, for example in Fig. 4 (p. 16, ll. 28-29). Set screw 57 and notch 59 prevent rotation of sleeve

42 in mounting tube 38 which prevents binding of hex shaft 54 in shaft access holes 96 (p. 16, ll. 29-31).

With reference to Figs. 1, 3, and 4, braking system 30 of the present invention allows a caregiver to actuate the brake pedal 56 or steer pedal 58 of any of the caster devices 44 and thereby engage the brake mechanisms 48 or anti-swivel mechanisms 50 respectively of all of the caster devices 44 simultaneously (p. 10, ll. 9-12). The illustrated caster devices 44 include brake mechanisms 48 and steer mechanisms 50 which are actuated by rotation of hex shafts 54 (p. 10, ll. 16-18). The illustrated braking system 30 mechanically links the hex shafts 54 of each caster device 44 so that rotation of one hex shaft 54 induces rotation of all of the hex shafts 54 (p. 10, ll. 18-20). Shaft access holes 96 are drilled or otherwise formed through outside wall 80 and inside wall 82 of mounting tube 38, in spaced relation to welds 40, and through outside surface 66 and inside surface 64 of side frame member 32, so that hex shaft 54 used to actuate the anti-swivel mechanism 50 and/or the brake mechanism 48 of caster device 44 may extend from the exterior of the mounting tube 38 through the interior of the side frame member 32 (p. 10, ll. 21-25).

Regarding independent claims 11 and 12, a method for attaching a caster 44 having a cylindrical sleeve 42 to a base frame 28 of a bed 20 is provided. With reference to Figs. 5 and 6, the method includes the steps of providing a caster 44 having a cylindrical sleeve 42, a mounting tube 38 having four side walls 80, 82, 84, and 86 configured to provide a substantially rectangular cross-sectional shape, and a base frame 28 of a bed 20 (p. 8, ll. 1-5, and p. 9, ll. 10-13). The method further comprises the step of forming an interior opening through the mounting tube 38 having a generally round cross-sectional shape to receive the cylindrical sleeve 42 of the caster 44 therein (p. 9, ll. 18-22). A first side wall 82 of the mounting tube 38 is placed against the base frame 28, and the mounting tube 38 is welded to the base frame 28 with first and second welds 40 located at opposite ends of the first side wall 82 (p. 9, ll. 12-16). The sleeve 42 of the caster 44 is next installed into the interior opening of the mounting tube 38 (p. 9, ll. 21-22). An opening 59 is formed in the mounting tube 38 to receive a set screw 57 and orient the caster 44 (p. 16, ll. 27-31).

Issues

A. Whether claims 21-27 are unpatentable under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

B. Whether claims 1-4, 8, and 10 are unpatentable under 35 U.S.C. § 103(a) over Reichow in view of Hall.

C. Whether claims 5 and 6 are unpatentable under 35 U.S.C. § 103(a) over Reichow in view of Hall, and further in view of Wisecarver and Stosberg.

D. Whether claim 7 is unpatentable under 35 U.S.C. § 103(a) over Reichow in view of Hall and Stosberg.

E. Whether claim 9 is unpatentable under 35 U.S.C. § 103(a) over Reichow in view of Hall, and further in view Stosberg.

F. Whether claim 12 is unpatentable under 35 U.S.C. § 103(a) over Hall in view of Wisecarver and in view of Stosberg.

Grouping of Claims

Claims 1-15, and 21-27 are believed to be separately patentable. However, for the purposes of this appeal, claims 1-3, 8, and 10 are grouped together; claims 5 and 6 are grouped together; claims 21-24, and 27 are grouped together; and the remaining claims are grouped separately.

Arguments

A. Claims 21-27 are patentable under 35 U.S.C. § 112, second paragraph, as being definite.

Claims 21-27 were improperly rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. Claims 21-24 and 27 satisfy the requirements of 35 U.S.C. § 112.

With reference to claim 21, the Examiner in the Final Rejection found it unclear as to how the movable shaft can be installed through a hole in the base frame and an aligned hole in the first external side wall in the caster mounting tube. More particularly, the Examiner stated that “a missing second hole, align (sic) with the first set of holes, is needed on the external side wall opposite the first external side wall of the caster mounting tube.” (Final Rejection, p. 2, ll. 14-16). The Examiner confirmed his position in the Advisory Action by stating that “if you look at Fig. 4 (upper right side hex shaft 54), a hole 96 (which is not recited on (sic) the claims) is needed on the external side wall in order for shaft 54 to be able to pass through mounting tube 38 and base frame.” (Advisory Action, p. 2, ll. 8-11).

It is respectfully submitted that claim 21 as presently recited satisfies the requirements of 35 U.S.C. § 112 as particularly pointing out and distinctly claiming the subject matter which applicants regard as the invention. More particularly, the first external side wall recited in claim 21 is the inside wall 82 as illustrated in Figs. 4-6. Shaft access holes 96 are drilled or otherwise formed through inside wall 82 of mounting tube 38 and through side frame member 32 of base frame 28. The holes 96 are configured to receive a shaft, such as hex shaft 54 which, in turn, is coupled to a brake/steer actuator 128, including brake pedal 56 and steer pedal 58. While in the illustrative embodiment a second external sidewall, illustratively outside wall 80, may also include a hole 96 in order to facilitate coupling of the brake/steer actuator 128, this is not a required element of the present invention. More particularly, the brake/steer actuator 128 could be coupled to the hex shaft in a variety of manners, such as through a linkage coupling to the hex shaft 54 through an open top of the caster mounting tube 38.

The Examiner has failed to establish a prima facie case of indefiniteness under 35 U.S.C. § 112. Instead, the Examiner is apparently attempting to add an unnecessary limitation to claim 21. As detailed above, claim 21 particularly points out and distinctly

claims the subject matter which applicants regard as the invention. Therefore, for at least these reasons, applicants request reversal of the Examiner's rejection of claims 21-24 and 27.

2. Claim 25 satisfies the requirements of 35 U.S.C. § 112.

In the Final Rejection, the Examiner likewise rejected claim 25 under 35 U.S.C. § 112, second paragraph, finding it unclear as to how the movable shaft operates or functions. More particularly, the Examiner stated that "[i]t is unclear if the movable shaft goes through only on the second opening of the caster mounting tube." (Final Rejection, p. 2, ll. 18-19). The Examiner requested clarification of the location of the opening with respect to the caster mounting tube and whether a hole is formed on the base frame. Again, it is respectfully submitted that claim 25 as presently recited satisfies the requirements of 35 U.S.C. § 112 as particularly pointing out and distinctly claiming the subject matter which the applicants regard as the invention. More particularly, the opening 59 is configured to receive set screw 57, while the second opening 96 is configured to receive a movable shaft, such as hex shaft 54 which is coupled to a brake/steer actuator 128, including brake pedal 56 and steer pedal 58.

In the Final Response claim 25 was amended not in acquiescence of the Examiner's rejection, but in an earnest attempt to expedite allowance of the application. As noted above, the amendments in the Final Response were not entered by the Examiner.

The Examiner has failed to establish a prima facie case of indefiniteness under 35 U.S.C. § 112. Instead, the Examiner is apparently attempting to add an unnecessary limitation added to claim 25. As detailed above, claim 25 particularly points out and distinctly claims the subject matter which applicants regard as the invention. Therefore, for at least these reasons, applicants respectfully request reversal of the Examiner's rejection of claim 25.

3. Claim 26 satisfies the requirements of 35 U.S.C. § 112.

In the Final Rejection, the Examiner likewise rejected claim 26 under 35 U.S.C. § 112, second paragraph, finding it unclear as to how the movable shaft operates or functions. More particularly, the Examiner stated that "[i]t is unclear where does (sic) the shaft located with respect to the mounting tube." (Final Rejection, p. 3, ll. 1-2). Again, the Examiner requested clarification of the location of the opening with respect to the caster mounting tube and whether a hole is formed on the base frame. It is respectfully submitted that claim 26 as presently recited satisfies the requirements of 35 U.S.C. § 112 as particularly pointing out and

distinctly claiming the subject matter which the applicants regard as the invention. More particularly, the opening 59 is configured to receive set screw 57, while the second opening 96 is configured to receive a movable shaft, such as hex shaft 54 which is coupled to a brake/steer actuator 128, including brake pedal 56 and steer pedal 58.

In the Final Response claim 26 was amended not in acquiescence of the Examiner's rejection, but in an earnest attempt to expedite allowance of the application. As noted above, the amendments in the Final Response were not entered by the Examiner.

The Examiner has failed to establish a prima facie case of indefiniteness under 35 U.S.C. § 112. Instead, the Examiner is apparently attempting to add an unnecessary limitation added to claim 26. As detailed above, claim 26 particularly points out and distinctly claims the subject matter which applicants regard as the invention. Therefore, for at least these reasons, applicants respectfully request reversal of the Examiner's rejection of claim 26.

B. Claims 1-4, 8, and 10 are patentable under 35 U.S.C. § 103(a) over Reichow in view of Hall.

The Examiner rejected claims 1-4, 8, and 10 under 35 U.S.C. § 103(a) as being unpatentable over Reichow et al. in view of Hall.

1. Claims 1- 3, 8, and 10 are patentable over the combination of Reichow and Hall.

Regarding independent claim 1, in the Final Rejection the Examiner acknowledged that Reichow fails to disclose that "the plurality of mounting tubes has a rectangular outer cross-sectional shape defined by four external side walls wherein each mounting tube is coupled to the base frame by welds located at opposite ends of the external side wall." (Final Rejection, p. 4, ll. 6-9). The Examiner then summarily concluded that it would be obvious to modify the caster support structure of Reichow to include a rectangular sleeve and caster mount tube welded to the base frame, as taught by Hall. (Final Rejection, p. 4, ll. 17-20).

Reichow, neither alone nor in combination with Hall, discloses, teaches, or suggests the patient support apparatus as recited in claim 1 comprising, "... a plurality of caster mounting tubes, each mounting tube including a plurality of external side walls surrounding an opening ... the interior surface [of the external side walls] being configured to receive in abutting relationship the sleeve of a caster" Neither Reichow nor Hall disclose, teach or

suggest a caster mounting tube including an interior surface configured to receive in abutting relationship the sleeve of a caster.

The Examiner in the Final Rejection stated that the term “abutting relationship” can be broadly read as “lie adjacent.” (Final Rejection, p. 10, ll. 4-6). Applicants respectfully submit that this definition is overly broad and that the accepted definition is “to touch along a border or with a projecting part.” (*Merriam-Webster’s Collegiate Dictionary*, Tenth Edition (1993)). In order to further emphasize this accepted definition and to advance the prosecution of the application, claim 1 was amended in the Final Response to recite that the interior surface of the caster mounting tube is configured to “directly contact” the sleeve of the caster. This amendment was submitted not in acquiescence of the Examiner’s rejection, but in an earnest attempt to expedite allowance of the application. As noted above, the amendments in the Final Response were not entered by the Examiner.

For the U.S. Patent and Trademark Office to “establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.” *Manual of Patent Examining Procedure* (M.P.E.P.) Section 2143.

It is well known that when combining the content of various references “there must be some teaching, suggestion or motivation in the prior art to make the specific combination that was made by the applicant.” *In re Dance*, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Raynes*, 28 USPQ2d 1630, 1631 (Fed. Cir. 1993); *In re Oetiker*, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). “The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.” *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Moreover, the Patent and Trademark Office can satisfy its burden of establishing obviousness “only by showing some *objective* teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teachings of the references.” *In re Fine*, 1837 F.2d 1071, 1073, 5 USPQ2d 1596 (Fed. Cir. 1988) (emphasis added) (citations omitted). The Federal Circuit in *In re Fine* stated that a “bald assertion” of substituting an element in a prior art reference would have been within the ordinary skill in the art is insufficient to support a finding of obviousness.” *Id.* at 1074.

The Federal Circuit has emphasized the requirement that the prior art must suggest the modifications necessary to achieve the claimed invention. The “mere possibility” that a prior art reference could be modified such that its use would lead to the particular result recited in a claim does not make that recited in the claim obvious “unless the prior art suggested the desirability of such a modification.” *In re Ochia*, 71 F.3d 1565, 1570, 37 USPQ2d 1127 (Fed. Cir. 1995). “Obviousness cannot be established by hindsight combination to produce the claimed invention.” *In re Dance*, 48 USPQ2d at 1637; *In re Gorman*, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). “Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight.” *In re Dembiczak*, 50 USPQ2d at 1617; *Feil*, 227 USPQ at 547 (Fed. Cir. 1985). The prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983); M.P.E.P. § 2141.02.

The Examiner has failed to satisfy the Patent and Trademark Office burden of establishing obviousness. More particularly, the Examiner fails to show any teaching that would suggest modifying Reichow et al. in the manner suggested. The prior art simply does not teach or suggest all of the limitations recited in claim 1.

Reichow simply discloses a weighing bed 10 including a lower bed frame 16 having two elongated longitudinal members 42 and 44. The longitudinal members 42 and 44 terminate in caster assemblies 45-45, which permit movement of the bed 10. Conventional casters on a bed is admitted prior art disclosed in the Background and Summary of the Invention section of the present application. No details of the caster assemblies 45-45 are provided in Reichow.

Hall relates to a Support System for a Holding Rack. More particularly, Hall discloses a holding rack 20 including a frame 24 having a first frame member 28 and a second frame member 32 joined to first frame member 28 at a corner 36. An upright 40 is located adjacent corner 36. An exterior support member 44 is disposed between upright 40 and outer perimeter of frame 24. A conventional caster 50 is positioned below and is rotatably secured relative to upright 40 and relative to exterior support member 44 by means of an extension 54.

The Examiner fails to point to the disclosure of Hall wherein the relationship between upright 40, exterior support member 44 and extension 54 teach or suggest the limitations recited in claim 1, more particularly, that of “... the interior surface [of the external side walls

of the caster mounting tube] being configured to receive in abutting relationship the sleeve of a caster”

Referring to Figs. 2 and 3 of Hall, it is clear that upright 40 is positioned between extension 54 and exterior support member 44. Referring to the text of Hall, “upright 40 is inserted into exterior support member 44 from above, as viewed in FIG. 2. Then, extension 54 is inserted into the interior of upright 40 from below.” (Col. 4, ll. 58-62). Applicants respectfully submit that an interior surface of exterior support member 44 does not receive in abutting relationship extension 54.

There is simply no disclosure in either the Reichow or Hall of the abutting relationship as clearly recited in claim 1. Given that none of the cited references disclose this relationship, applicants fail to see how a combination of these references could possibly motivate one of ordinary skill in the art to arrive at the applicants’ invention. For at least these reasons, applicants respectfully submit that the patient support apparatus as recited in independent claim 1 is patentable over the Reichow and Hall patents. Accordingly, applicants submit that independent claim 1 is in condition for allowance.

Claims 2, 3, and 8 depend from claim 1 and are patentable over the Reichow and Hall patents at least for the reasons given above in connection with claim 1. Therefore, for at least these reasons, applicants request reversal of the Examiner’s rejection of claims 1-3, and 8.

2. Claim 4 is patentable over the combination of Reichow and Hall.

Claim 4 adds to the recited combination of claim 3 the further limitations that the first external side wall abutting the base frame is formed to include a hole, the base frame is formed to include a hole, the hole in the base frame being aligned with the hole in the first external side wall, and wherein both holes are located between the first and second welds.

As acknowledged by the Examiner, Reichow “fails to show the base frame is formed to include a hole aligned to a hole in the external side wall abutting the base frame and both holes are located between the welds.” (Final Rejection, p. 4, ll. 21- p. 5, ll. 2). Hall discloses that the exterior support member 44 is attached to the vertical face 38 of frame 24, “such as by welding, rivets, or spot welding.” (Hall, col. 4, ll. 55-57, emphasis added).

The Examiner concluded that “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to have used rivets and welds to secure the mounting tube and base frame into the apparatus of Reichow et al., in view of the teaching of Hall in order to more securely attach the mounting tube to the base frame. . . .” (Final Rejection, p. 5, ll. 7-11).

Initially, Hall discloses various exclusive methods of attaching the exterior support member 44 to the frame 24, including welding or rivets. There is no suggestion in Hall of combining the methods of welding and rivets. Moreover, there is no hint or suggestion in Hall of providing a pair of holes located between first and second welds. As such, there is simply no disclosure of suggestion in Reichow, alone or in combination with Hall, of the limitations of claim 4.

For at least these reasons, applicants submit that claim 4 patentably defines the invention over Reichow and Hall. Therefore, applicants respectfully request reversal of the Examiner's rejection of claim 4.

C. Claims 5 and 6 are patentable under 35 U.S.C. § 103(a) over Reichow in view of Hall, and further in view of Wisecarver and Stosberg.

The Examiner improperly rejected claims 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Reichow in view of Hall, and further in view of Wisecarver and Stosberg.

Claim 5 adds to the recited combination of claim 1 the further limitations that the sleeve of each caster has a cylindrical shape and the plurality of caster mounting tubes each include interior partially cylindrical concave wall sections configured to receive one of the cylindrical sleeves. Claim 6 depends from claim 5.

For an Examiner to properly rely on a reference under 35 U.S.C. § 103, the reference must be analogous prior art. *See M.P.E.P.* Section 2141.01(a). "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oediker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992).

"A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). "Thus, the purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve. If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference...." *Id.*

The purpose of the Wisecarver patent, entitled "Extensible Load Bracing Device," is to provide a bracing device that can be accommodated in restricted and limited space by

reason of a particular arrangement of specific nut design with a captive wrench. The brace provides a square tube 1 having a sleeve 6 of cylindrical interior welded therein.

Applicants, on the other hand, have addressed the problem of utilizing a caster mounting tube having a planar external side wall mounted to the frame of a patient support apparatus and being configured to receive the sleeve of a caster device. Clearly, it cannot reasonably be asserted that the purpose of providing a mounting tube for the receipt of a caster sleeve on a patient support apparatus is the same as the purpose of providing a bracing device for use in restricted and limited space. Since Wisecarver does not even remotely relate to the same problem as the present invention, applicants would not have been motivated to consider Wisecarver in making their invention. These disciplines are entirely unrelated. Accordingly, applicants respectfully request reversal of the Examiner's rejections of claims 5 and 6.

In an attempt to support his position, the Examiner takes "Official Notice that it is old and well known of using a square tubing with a thick wall by cutting a cylindrical cross-section through the square interior wall to receiving (sic) a cylindrical sleeve of a caster, is a matter of design choice that have the same intended function of sliding freely and large bearing areas between the mounting tube and the sleeve, depending upon cost and availability of materials during manufacturing." (Final Rejection, p. 6, ll. 6-11).

This conclusory statement by the Examiner does not satisfy the Patent and Trademark Office burden as clearly defined by the Federal Circuit. In its simplest form, the Examiner is essentially stating that the invention is obvious because he has taken notice of such. This simply does not satisfy the Patent and Trademark Office burden of establishing obviousness and circumvents the requirements of 35 U.S.C. § 103.

For these additional reasons, it is respectfully submitted that claims 5 and 6 are in condition for allowance. Applicants respectfully request reversal of the Examiner's rejections of claims 5 and 6.

D. Claim 7 is patentable under 35 U.S.C. § 103(a) over Reichow in view of Hall and Stosberg.

The Examiner improperly rejected independent claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Reichow in view of Hall and Stosberg.

It is noted that claim 7 was originally solicited as depending from claim 1, and further recites the limitations of a plurality of set screws configured to orient the plurality of casters, and wherein the caster mounting tubes are each formed to include an opening configured to

receive one of the set screws. In response to the Office Action mailed January 30, 2002, holding that claim 7 contained allowed subject matter, claim 7 was rewritten in independent form. It is respectfully submitted that claim 7 remains in condition for allowance.

The Reichow et al., Hall, and Stosberg et al. patents, each alone or in combination, fail to disclose, teach or suggest the patient support apparatus recited in amended claim 7 comprising "... a plurality of caster mounting tubes, each mounting tube having ... a plurality of external side walls including a generally planar first external side wall abutting the base frame, the mounting tube being connected to the base frame by welds located adjacent the first external side wall, and a plurality of set screws configured to orient the plurality of casters and wherein the caster mounting tubes are each formed to include an opening configured to receive one of the set screws."

The Stosberg et al. patent simply discloses a conventional castor including a cylindrical casing 16. The castor is inserted in a tubular foot 24 of a bed frame and secured therein by means of a screw 25.

While Hall at Col. 4, lines 55-57 suggests the attachment of an exterior support member 44 to vertical face 38 of a frame 24, such as by "welding, rivets, or spot welding", this clearly does not suggest a set screw received within an opening formed within the caster mounting tube alone, or in combination with welds adjacent the first external side wall as recited in claim 7. Stosberg et al. fails to overcome this deficiency, since there is no hint or suggestion in this reference of providing the set screw in combination with welds adjacent the generally planar first external side wall.

The Examiner's conclusory statement that "it is old and well-known to use rivets and welding together" does not satisfy the Patent and Trademark Office burden as clearly defined by the Federal Circuit. The Examiner has simply failed to provide any teaching or suggestion which would motivate one of ordinary skill in the art to arrive at the invention recited in amended claim 7.

In the Final Rejection, the Examiner stated with respect to claim 7 that "Applicant's argument is more specific than the claim language." (Final Rejection, p. 10, l. 15). More particularly, the Examiner apparently believes that the recitation of "a set screw" in combination with "welds located adjacent the first external side wall" is more specific than the claim language. That is simply not the case. Claim 7 clearly requires "a plurality of set screws configured to orient the plurality of casters" (ll. 9-10) in combination with a mounting tube "connected to the base frame by welds located adjacent the first external side wall" (ll. 7-8).

As such, for at least the reasons provided above, applicants submit that independent claim 7 is in condition for allowance. Therefore, applicants respectfully request reversal of the Examiner's rejection of claim 7.

E. Claim 9 is patentable under 35 U.S.C. § 103(a) over Reichow in view of Hall, and further in view of Stosberg.

Claim 9 has been improperly rejected under 35 U.S.C. § 103(a) as being unpatentable over Reichow in view of Hall, and further in view Stosberg et al.

Claim 9 adds to the recited combination of claim 1 the further limitation that the sleeve of each caster has a cylindrical shape.

As acknowledged by the Examiner, "Reichow et al. as modified fail (sic) to disclose wherein the sleeve of each caster has a cylindrical shape." (Final Rejection, p. 8, ll. 4-5). However, the Examiner then summarily concluded that "[i]t would have been obvious to one of ordinary skill in the art to have utilize (sic) a sleeve of a caster that has a cylindrical shape, in view of teaching of Stosberg et al., since it is within the general skill in the art to make a change in the form or shape on the basis of its suitability for intended use as a matter of obvious design choice." (Final Rejection, p. 8, ll. 6-9).

Applicants submit that there is no disclosure or suggestion in the cited references of any motivation to combine these references to produce the claimed invention. More particularly, there is no hint or suggestion in the cited references of combining a caster mounting tube including a generally planar first external side wall and a sleeve of a caster having a cylindrical shape. Therefore, such combination by the Examiner uses impermissible hindsight and is improper.

Even if such an improper combination is made, this does not disclose or suggest the invention of claim 9. In fact, applicants fail to see how one of ordinary skill in the art could possibly modify Hall in light of Reichow and Stosberg and arrive at the invention recited in claim 9. Therefore, applicants submit that claim 9 patentably defines the invention over the cited references. For at least these reasons, applicants respectfully request reversal of the Examiner's rejection of claim 9.

F. Claim 12 is patentable under 35 U.S.C. § 103(a) over Hall in view of Wisecarver and in view of Stosberg.

The Examiner rejected independent claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Hall in view of Wisecarver and in view of Stosberg et al.

It is noted that claim 12 was found to contain allowable subject matter in both the Office Action mailed January 30, 2002 and in the Office Action mailed May 29, 2003. In response, claim 12 was rewritten into independent form.

As detailed above, Wisecarver is non-analogous art and, as such, is not properly considered in rejecting claim 12. Furthermore, there is simply no cited prior art reference which would motivate one of ordinary skill in the art to modify Hall by forming an interior opening through a mounting tube having a generally round cross-sectional shape to receive the cylindrical sleeve of a caster therein.

In rejecting claim 12, the Examiner has taken "Official Notice that it is old and well known of using a square tubing with a thick wall by cutting a cylindrical cross-section through the square interior wall to receiving (sic) a cylindrical sleeve of a caster..." (Final Rejection p. 9, ll. 13-15). This official notice does not satisfy the Patent and Trademark Office burden of establishing obviousness and circumvents the requirements of 35 U.S.C. § 103.

It is clear that "deficiencies of the cited reference cannot be remedied by ... general conclusions about what is 'basic knowledge' or 'common sense'." *In re Zurko*, 258 F.3d 1379, 1385 (Fed. Cir. 2001). As stated by the Federal Circuit, "[t]his factual question of motivation is material to patentability, and could not be resolved on subjective beliefs and unknown authority." *In re Lee*, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002) (quoting *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983)). In the present case, the Examiner's conclusory statement that "it is old and well known of using a square tubing with a thick wall by cutting a cylindrical cross-section through the square interior wall to receiving (sic) a cylindrical sleeve of a caster ..." does not satisfy the Patent and Trademark Office burden as clearly defined by the Federal Circuit. The Examiner has simply failed to provide any objective teaching which would motivate one of ordinary skill in the art to arrive at the invention recited in claim 12.

For at least the foregoing reasons, there is simply no teaching or suggestion in the prior art of providing the elements as clearly recited in independent claim 12. Therefore, applicants respectfully request reversal of the Examiner's rejection of claim 12.

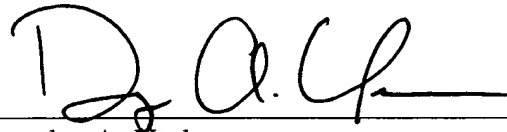
Conclusion

In view of the above, Applicants submit that the Examiner's rejections are without merit. Applicants therefore request that the present rejections be reversed and a Notice of Allowance be issued in due course.

If necessary, please consider this a Petition for Extension of Time to effect a timely response. Please charge any additional fees or credits to the account of Bose McKinney & Evans, LLP Deposit Account No. 02-3223.

Respectfully submitted,

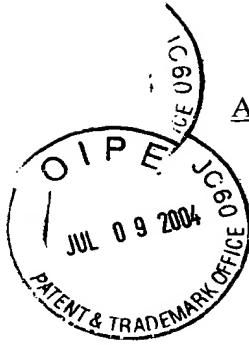
BOSE McKINNEY & EVANS, LLP

A handwritten signature in black ink, appearing to read 'D. A. Yerkeson', is written over a horizontal line.

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APPLICATION SERIAL NO. 09/992,455

APPEAL BRIEF

APPENDIX A

Listing of Claims

1. (previously presented) A patient support apparatus comprising:
 - a base frame,
 - a patient support coupled to the base frame,
 - a plurality of casters each having a sleeve, and
 - a plurality of caster mounting tubes, each mounting tube including a plurality of external side walls surrounding an opening, each of the external side walls having an interior surface facing inwardly toward the opening and an exterior surface facing outwardly away from the opening, the interior surface being configured to receive in abutting relationship the sleeve of a caster, the plurality of external side walls including a generally planar first external side wall, a first exterior surface of the generally planar first external side wall abutting the base frame, the mounting tube being connected to the base frame by welds located adjacent the generally planar first external side wall.
2. (original) The apparatus of claim 1, wherein each of the plurality of caster mounting tubes has a rectangular outer cross-sectional shape defined by four external side walls.
3. (original) The apparatus of claim 1, wherein each mounting tube is coupled to the base frame by first and second welds located at opposite ends of the first external side wall.
4. (original) The apparatus of claim 3, wherein the first external side wall abutting the base frame is formed to include a hole, the base frame is formed to include a hole, the hole in the base frame is aligned with the hole in the first external side wall, and both holes are located between the first and second welds.
5. (original) The apparatus of claim 1, wherein the sleeve of each caster has a cylindrical shape and the plurality of caster mounting tubes each include interior partially cylindrical concave wall sections configured to receive one of the cylindrical sleeves.

6. (original) The apparatus of claim 5, wherein the each of the mounting tubes also includes a corner notch located between the concave wall sections.

7. (previously presented) A patient support apparatus comprising:

- a base frame,

- a patient support coupled to the base frame,

- a plurality of casters each having a sleeve,

- a plurality of caster mounting tubes, each mounting tube having an interior configured to receive the sleeve of a caster, a plurality of external side walls including a generally planar first external side wall abutting the base frame, the mounting tube being connected to the base frame by welds located adjacent the first external side wall, and

- a plurality of set screws configured to orient the plurality of casters and wherein the caster mounting tubes are each formed to include an opening configured to receive one of the set screws.

8. (original) The apparatus of claim 1, wherein each of the caster mounting tubes has a square cross-sectional shape.

9. (original) The apparatus of claim 1, wherein the sleeve of each caster has a cylindrical shape.

10. (original) The apparatus of claim 1, wherein the sleeve of each caster has a rectangular cross-sectional shape.

11. (previously presented) A method for attaching a caster having a cylindrical sleeve to a base frame of a bed, the method comprising the steps of:

- providing a caster having a cylindrical sleeve, a mounting tube having four side walls configured to provide an interior opening having a substantially rectangular cross-sectional shape, and a base frame of a bed having an outer surface;

- removing material from the mounting tube such that at least a portion of the interior opening has a generally round cross-sectional shape to receive the cylindrical sleeve of the caster therein;

- placing a first side wall of the mounting tube against the outer surface of the base frame;

welding the mounting tube to the base frame with first and second welds located at opposite ends of the first side wall; and
installing the sleeve of the caster into the interior opening of the mounting tube.

12. (previously presented) A method for attaching a caster having a cylindrical sleeve to a base frame of a bed, the method comprising the steps of:

providing a caster having a cylindrical sleeve, a mounting tube having four side walls configured to provide a substantially rectangular cross-sectional shape, and a base frame of a bed;

forming an interior opening through the mounting tube having a generally round cross-sectional shape to receive the cylindrical sleeve of the caster therein;

placing a first side wall of the mounting tube against the base frame;

welding the mounting tube to the base frame with first and second welds located at opposite ends of the first side wall;

installing the sleeve of the caster into the interior opening of the mounting tube;

providing a set screw; and

forming an opening in the mounting tube to receive the set screw and orient the caster.

13. (original) The method of claim 11, wherein the four side walls of the mounting tube are configured to define an interior opening through the tube having a generally square cross-sectional shape prior to the forming step.

14. (original) The method of claim 11, wherein each of the caster mounting tubes has a square cross-sectional shape.

15. (previously presented) The method of claim 11, wherein the step of welding the mounting tube to the base frame with first and second welds located at opposite ends of the first side wall includes providing a two axis welding machine.

Claims 16-20 (canceled)

21. (previously presented) A patient support apparatus comprising:
- a base frame;
 - a patient support coupled to the base frame;
 - a plurality of casters each having a sleeve; and
 - a plurality of caster mounting tubes, each mounting tube having an interior configured to receive the sleeve of a caster, a plurality of external side walls including a generally planar first external side wall abutting the base frame, the mounting tube being connected to the base frame by welds located adjacent the first external side wall, wherein the first external side wall abutting the base frame is formed to include a hole, the base frame is formed to include a hole, the hole in the base frame being aligned with the hole in the first external side wall, and both holes are configured to receive a movable shaft and are positioned in spaced relation to the welds located adjacent the first external side wall.
22. (previously presented) The apparatus of claim 21, wherein each of the plurality of caster mounting tubes has a rectangular outer cross-sectional shape defined by four external side walls.
23. (previously presented) The apparatus of claim 21, wherein the sleeve of each caster has a cylindrical shape and the plurality of caster mounting tubes each include interior partially cylindrical concave wall sections configured to receive one of the sleeves.
24. (previously presented) The apparatus of claim 23, wherein each of the mounting tubes also includes a corner notch located between concave wall sections.
25. (previously presented) The apparatus of claim 7, wherein the caster mounting tubes are each formed to include a second opening configured to receive a movable shaft operably coupled to a brake mechanism of the caster.
26. (previously presented) The method of claim 12, further comprising the steps of forming a shaft opening in the mounting tube, and inserting a movable shaft into the shaft opening.
27. (previously presented) The apparatus of claim 21, wherein the movable shaft is operably coupled to a brake mechanism of the caster.